AMENDMENTS TO THE CLAIMS

Claims 1-18 (canceled)

Claim 19 (previously presented): A method of fabricating a three-dimensional periodic structure comprising the steps of:

forming layers with at least two kinds of materials sequentially and periodically on a substrate having two-dimensionally periodically recessed or projecting portions;

and

employing sputter etching either separately from film deposition or simultaneously with film deposition, at least in a part of said structure, while keeping a pattern of the receded or projecting portions.

Claim 20 (previously presented): The method of claim 19, wherein said deposition is further characterized by incidence of particles.

Claim 21 (previously presented): The method of claim 19, wherein a period of said structure further comprises at least two kinds of layers including a layer mainly comprising SiO_2 and a layer mainly comprising Si.

Claim 22 (previously presented): A structure fabricated by the method of claim 19, comprising at least two kinds of material, at least one said material being a transparent material whose period in at least one dimension is of the order of or a fraction of a wavelength of concerned light, at least two said kinds of materials being in a form of layers, said structure including an x-y direction, at least one said layer being continuous relative to said x-y direction.

Claim 23 (previously presented): The structure of claim 22, wherein a part of said structure comprises at least one of a material having a nonlinear optical susceptibility, an electrooptic material, a light emitting material, a light amplifying material, and a conductive material.

Claim 24 (previously presented): The structure of claim 22, wherein said layers each have characteristic diffraction effects of light.

Claim 25 (previously presented): The structure of claim 22, wherein said structure further shows optical biaxial anisotropy.

Claim 26 (previously presented): The structure of claim 22, wherein said structure further shows dispersion characteristics near the edge of a forbidden frequency band.

Claim 27 (previously presented): The structure of Claim 22, wherein each said layer is continuous relative to said x-y direction.

Claim 28 (canceled)

Claim 29 (canceled)